

REMARKS

Reconsideration of the application is respectfully requested.

I. Status of the Claims

Claims 12, 18-20, and 25-27 were previously cancelled without prejudice or disclaimer of the subject matter therein. With this present Response, claims 1 – 5, 9 and 28 are cancelled without prejudice or disclaimer.

Claims 13-17 and 21-24 have been previously withdrawn.

Claim 6 has been amended, and new claim 29 has been added. No new matter has been introduced. Support for the amendments may be found, for example, with reference to Applicants' specification at page 6, lines 21 and 22 and page 23, line 9 through page 24, line 21.

Claims 6 - 8, 10, 11, 13 - 17, 21-24 and 29 are currently pending.

II. Rejection Under 35 U.S.C. § 112

Claims 1 – 11 and 28 are rejected under the second paragraph of 35 U.S.C. § 112 as being indefinite. Specifically, the Examiner suggests that the claim term “mess-insertion direction” in claims 1 and 6 should be amended to read “press-insertion direction”. As claims 1 – 5, 9 and 28 are cancelled, the rejections as to claims 1 – 5, 9 and 28 are moot. Claims 7, 8, 10 and 11 depend from amended claim 6 and appear to be rejected on this basis. Applicants amend claim 6 as suggested by the Examiner.

Therefore, Applicants respectfully request that the rejection of claims 6 – 8, 10 and 11 under the second paragraph of 35 U.S.C. § 112 be withdrawn.

III. Rejections Under 35 U.S.C. § 103

Claims 1 – 5 and 6 - 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,290,918 to Weasler (“Weasler”). Claims 1 - 5 and 6 - 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent Publication JP 2000-283264 to Kumai (“Kumai”) in view of Weasler. Claim 28 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Weasler in view of U.S. Patent No. 5,855,444 to Ohlson et al. (“Ohlson”). As claims 1- 5, 9 and 28 have been cancelled without prejudice or disclaimer, the rejections as to claims 1 – 5, 9 and 28 are moot. Applicants amend claim 6 to further clarify the nature of their invention, and respectfully traverse the rejections of claims 6 – 8, 10 and 11 under 35 U.S.C. § 103(a).

Amended independent claim 6 claims:

6. A rotation transmission assembly comprising:

a rotation transmission member formed in a substantially circular plate configuration, in a center of which there is a substantially circular cylinder shaped through hole that is formed by an inner circumferential surface, and that comprises a rotation transmission portion located on an outer circumferential portion of the rotation transmission member; and

an inner side member that is press-inserted into the through hole and is a sintered component that is manufactured by powder molding and sintering, wherein

the inner circumferential surface of the rotation transmission member is provided with:

a smooth ring-shaped surface that is placed adjacent to one end of the inner circumferential surface; and

wherein a plurality of protrusion shaped portions that, taking the ring-shaped surface as a basis, protrude inwards in the radial direction, and extend along a portion of the length in the axial direction of the through hole,

wherein the inner side member and the rotation transmission member mesh with each other within the range in which the protrusion shaped portions extend, and are in surface contact with each other within a range in which the ring-shaped surface extends,

wherein the height of the protrusion shaped portions from the ring-shaped surface is 0.5 to 10 μm ; and

front end surfaces in a press-insertion direction of the protrusion shaped portions incline toward the rear in the press-insertion direction from the inner circumferential surface to top ends of the protrusion shaped portions.

In the rotation transmission assembly claimed by Applicants, a bearing member ("inner side member") is press-inserted into a through hole of a rotation transmission member toward a side where convex bars ("protrusion shaped portions") are formed, such that the protrusion shaped portions press into an outer circumferential surface of the bearing member which assumes a compressed state as it is press-inserted into the through hole. The rotation transmission member and the inner side member are firmly fixed by the press-insertion, as facilitated by a biting of the protrusion-shaped portions into an outer circumferential surface of the inner side member that has been press-inserted and a compression, both resulting in an increase in density. In this manner, displacement resistance of the inner side member is effectively provided. Compression and biting into the inner side member are facilitated by providing the inner side member as a sintered component.

In sharp contrast to Applicants' claimed invention, none of Weasler, Kumai or Ohlson teach or suggest an assembly having these features. For example, Weasler teaches a convention splined arrangement in which protruding splines 10 on a shaft are mated with indented splines 14 on a coupling element. Similarly, in Kumai, a protruding knurled part 2 is mated with an indented knurled part 11. Neither Weasler nor Kumai indicate that adhesion of one member to the other is accomplished by a deformation that allows protrusions in the transmission member to bite into the cylindrical surface of an inner side member. While Ohlson teaches deformation as a means for centering a brake drum on a hub, the deformation is of protruding portions on the interior of the brake drum. Thus, and in sharp contrast to Applicants' claimed assembly, the protrusions of Ohlson are deformed for centering rather than providing a means for compressing and deforming the hub in order to fix the drum to the hub. None of the cited references teach Applicants' claimed inner member that is provided as a sintered component in order to be suitably compressed and deformed by the protrusions of the rotation transmission member.

For at least the above argued reasons. Applicants submit that amended independent claim 6 is not made obvious by any combination of the cited references, and stands in condition for

allowance. As claims 7, 8, 10 and 11 depend from allowable independent claim 6, Applicants further submit that dependent claims 7, 8, 10 and 11 are also allowable for at least this reason.

Therefore, Applicants respectfully request that the rejections of claims 6 – 8, 10 and 11 under 35 U.S.C. § 103(a) be withdrawn.

IV. New Claim

Applicants add new claim 29. As new claim 29 depends from allowable independent claim 6, Applicants submit that new claim 29 is also allowable for at least this reason.

CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

The Examiner is respectfully requested to contact the undersigned at the telephone number indicated below if the Examiner believes any issue can be resolved through either a Supplemental Response or an Examiner's Amendment.

It is believed that no fee is required for these submissions. Should the U.S. Patent and Trademark Office determine that additional fees are owed or that any refund is owed for this application, the Commissioner is hereby authorized and requested to charge the required fee(s) and/or credit the refund(s) owed to our Deposit Account No. 04-0100.

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Respectfully submitted,

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